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a transition arm coupled to each of the double ended members, the transition arm including a plurality of drive arms, each drive arm defining a drive arm axis,

a plurality of joints, each joint for coupling one of the plurality of drive arms to a respective one of the double ended members, each joint providing degrees of freedom in four directions between the transition arm and the respective double ended member, the four degrees of freedom being a) about the drive arm axis, b) along the drive arm axis, c) about an axis perpendicular to the drive arm axis, and d) in the direction of the perpendicular axis, and

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a universal joint connecting the transition arm to a support.

70. (Amended) A piston assembly, comprising:

a plurality of double ended members, each double ended member having first and second elements configured for linear motion along a common axis, at least one of the first and second elements being a piston,

a transition arm coupled to a stationary support, the transition arm including a plurality of drive arms, each drive arm defining a drive arm axis, and

a plurality of joints, each joint for coupling one of the plurality of drive arms to a respective one of the double ended members, each joint providing degrees of freedom in four directions between the transition arm and the respective double ended piston, the four degrees of freedom being a) about the drive arm axis, b) along the drive arm axis, c) about an axis perpendicular to the drive arm axis, and d) in the direction of the perpendicular axis.

72. (Amended) A piston assembly, comprising:

elements configured for linear motion along a common axis, at least one of the first and second elements being a piston,

a transition arm coupled to a stationary support, the transition arm including a plurality of drive arms, each drive arm defining a drive arm axis, and

a plurality of joints, each joint for coupling one of the plurality of drive arms to a respective one of the double ended members, each joint providing rotation about the drive arm axis, and sliding in the direction of at least one of first and second orthogonal axes perpendicular to the common axis.

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Please add claims 77-82.

The assembly of claim 45 further comprising an intake valve. --77.

- The assembly of claim 45 further comprising an exhaust valve. 78.
- 79. The assembly of claim 45 further comprising spark plugs.
- The assembly of claim 45 comprising an engine. 80.
- The assembly of claim 45 comprising a pump. 81.
- The assembly of claim 45 comprising a compressor.--82.

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